REMARKS

By this Amendment, claims 2, 3 and 5-8 have been cancelled without prejudice to or disclaimer of the subject matter contained therein, and claims 1 and 4 have been amended, leaving claims 1 and 4 pending. The specification has been amended at several locations to change the term "suspending liquid" to "supporting liquid" for consistency. Reconsideration of the May 27 Office Action is respectfully requested in view of the above amendments and the following remarks.

Claims 1-8 stand rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,187,170 to *Westcott et al.* ("*Westcott*"). The rejection is respectfully traversed.

Claim 1, as amended, recites "a method for separating *different kinds* of solid plastic particles in a solid plastic mixture, which comprises the steps of preparing a solid plastic mixture comprising *plural kinds* of diamagnetic solid plastic particles, floating, suspending or precipitating said solid plastic particles in an aqueous solution of paramagnetic inorganic salt as a supporting liquid, applying a magnetic field gradient to the solid plastic mixture, and levitating or anti-levitating said plastic particles *at different locations* in the supporting liquid under the magnetic field gradient, depending upon the densities and diamagnetic susceptibilities of the plastic particles" (emphasis added).

By practicing the method recited in claim 1, *plural kinds* of diamagnetic solid plastic particles in a solid plastic mixture can be separated by levitating or anti-levitating the plastic particles at different locations of a supporting liquid, which is an aqueous solution of *paramagnetic* inorganic salt. Fig. 2 shows Example 1 where plural different

kinds of plastics (SPP, SB, PS, and SA plastics) are separated in an aqueous solution of a paramagnetic inorganic salt. In this example, the plastic particles are pushed downward into the liquid (i.e., anti-levitated) and separated by the application of a magnetic field gradient (*see*, paragraphs [0011] and [0021] of specification). Fig. 3 shows Example 2 where plural kinds of plastic particles (PMMA and PET plastics) are pushed upward (i.e., levitated) and separated at different locations in the supporting liquid (*see*, paragraph [0022]). As depicted in Figs. 2 and 3, plural kinds of diamagnetic plastic particles can be separated (at the same time) to different, individual locations in the supporting liquid.

Westcott discloses magnetic techniques for separating non-magnetic materials. *Westcott* discloses that essentially-nonmagnetic material is made to respond selectively to a magnetic field by immersing or suspending such material in a solution containing magnetic salts. The magnetic field causes the material to move to a region of the solution where it can be recovered. In *Westcott's* process, the non-magnetic material that is separated is precipitated (*see* column 4, lines 34-39). In other words, the mixture is separated into two components, i.e., a precipitate and a non-precipitate, and the precipitate is separated. *Westcott* fails to disclose that the process separates *different kinds* of solid plastic particles by levitating or anti-levitating the plastic particles at different locations in a supporting liquid under a magnetic field gradient. Thus, *Westcott* fails to anticipate the method recited in claim 1.

Claim 4 depends from claim 1 and, accordingly, also is patentable over *Westcott* for at least the same reasons as claim 1. Withdrawal of the rejection is therefore respectfully requested.

Claims 1-8 stand rejected under 35 U.S.C. §102(e) over U.S. Patent No. 5,957,298 to *Buske et al.* ("*Buske*"). The rejection is respectfully traversed.

Buske also fails to disclose a method for separating different kinds of solid plastic particles in a solid plastic mixture, as recited in claim 1. *Buske* discloses a process for separating non-magnetic materials and objects using a "magnetic fluid." *Buske* also refers to "superparamagnetic fluids" (column 2, lines 26-28). The magnetic fluid comprises iron oxide particles consisting of magnetite (*see* column 1, lines 17-18, and column 8, lines 25-29). Applicants submit that those skilled in the art would understand that the terms "magnetic fluid" and supermagnetic fluid" have the same meaning in *Buske*. The magnetic fluid of *Buske* has a level of magnetism that is far higher (about 10^2 to 10^5 x) than that of a paramagnetic liquid, and exhibits ferromagnetism or "superparamagnetism" depending upon the particle size. Such magnetism is referred to in the art as "magnetic" in comparison to conventionally-called "non-magnetic" behavior exhibited by paramagnetic and diamagnetic materials (*see*, column 1, line 61 - column 2, line 2, of *Westcott*).

The magnetic fluid disclosed in *Buske* is different from the aqueous solution of paramagnetic inorganic salt (supporting liquid) recited in claim 1 regarding both its magnetic strength and composition. That is, the paramagnetic supporting liquid is "non-magnetic" and is an aqueous solution; *Buske's* magnetic fluid is "strong magnetic" and is a

suspension of magnetite particles. The force exerted by the magnetic fluid used in *Buske's* process is much stronger than the force exerted by the paramagnetic supporting liquid used in the method recited in claim 1. Consequently, *Buske's* process using a magnetic fluid would not be suitable for separating particles having only slight differences in density, such as plural kinds of diamagnetic solid plastic particles that can be separated by the method recited in claim 1.

For the above reasons, *Buske* also fails to anticipate the method recited in claim 1. Dependent Claim 4 also is patentable over *Buske*. Therefore, withdrawal of the rejection is respectfully requested.

For the foregoing reasons, the application is believed to be in condition for allowance, and such action is earnestly solicited.

Respectfully submitted,

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